CLAIMS

1. A method of production of a dielectric ceramic composition having at least

a main component expressed by a formula Ba_mTiO_{2+n}, wherein m is $0.995 \leq m \leq 1.010$, n is $0.995 \leq n \leq 1.010$, and the ratio of Ba and Ti is $0.995 \leq Ba/Ti \leq 1.010$,

a first subcomponent containing at least one compound selected from MgO, CaO, BaO, SrO, and Cr_2O_3,

a second subcomponent containing at least one compound selected from SiO_2, MO (where M is at least one element selected from Ba, Ca, Sr, and Mg), Li_2O, and B_2O_3,

a third subcomponent containing at least one compound selected from V_2O_5, MoO_3, and WO_3, and

a fourth subcomponent containing an oxide of R (where R is at least one element selected from Y, Dy, Td, Gd, and Ho), wherein

the ratio of the subcomponents with respect to 100 moles of the main component is

first subcomponent: 0.1 to 3 moles,

second subcomponent: 2 to 12 moles,

third subcomponent: 0.01 to 3 moles,

fourth subcomponent: 0.1 to 10.0 moles (where, the number of moles of the fourth subcomponent is a ratio of R alone),

said method of producing the dielectric ceramic composition comprising the step of:

mixing in said main component at least part of other subcomponents except for said second subcomponent to prepare a pre-calcination powder,

calcining the pre-calcination powder to prepare a calcined powder, and

mixing at least said second subcomponent in said calcined powder to obtain the dielectric ceramic composition having molar ratios of the subcomponents to the main

component of the above ratios.

2. The method of production of a dielectric ceramic composition as set forth in claim 1, obtaining a dielectric ceramic composition further containing a fifth subcomponent containing MnO and having a ratio of the fifth subcomponent to 100 moles of the main component of 0.05 to 1.0 mole.

3. The method of production of a dielectric ceramic composition as set forth in claim 1, obtaining a dielectric ceramic composition having a molar ratio of the third subcomponent to 100 moles of the main component of 0.01 to 0.1 mole.

4. The method of production of a dielectric ceramic composition as set forth in claim 2, obtaining a dielectric ceramic composition having a molar ratio of the third subcomponent to 100 moles of the main component of 0.01 to 0.1 mole.

5. The method of production of a dielectric ceramic composition as set forth in claim 1, wherein the pre-calcination powder is prepared so that the molar ratios of components contained in the pre-calcination powder (Ba+metal element of the first subcomponent)/(Ti+metal element of the fourth subcomponent) is less than 1, or (Ba+metal element of the fourth subcomponent)/(Ti+metal element of the first subcomponent) is over 1, and calcination is performed.

6. The method of production of a dielectric ceramic composition as set forth in claim 2, wherein the pre-calcination powder is prepared so that the molar ratios of components contained in the pre-calcination powder (Ba+metal element of the first subcomponent)/(Ti+metal element of the fourth subcomponent) is less than 1, or (Ba+metal element of the fourth subcomponent)/(Ti+metal element of the first subcomponent) is over 1, and calcination is performed.

7. The method of production of a dielectric ceramic composition as set forth in claim 1, wherein the first subcomponent is always contained in the pre-calcination

powder when preparing the pre-calcination powder.

8. The method of production of a dielectric ceramic composition as set forth in claim 2, wherein the first subcomponent is always contained in the pre-calcination powder when preparing the pre-calcination powder.

9. The method of production of a dielectric ceramic composition as set forth in claim 1, wherein the pre-calcination powder is calcined at a temperature of 500°C to less than 1200°C.

10. The method of production of a dielectric ceramic composition as set forth in claim 2, wherein the pre-calcination powder is calcined at a temperature of 500°C to less than 1200°C.

11. The method of production of a dielectric ceramic composition as set forth in claim 9, wherein the calcination is performed for a plurality of times.

12. The method of production of a dielectric ceramic composition as set forth in claim 10, wherein the calcination is performed for a plurality of times.

13. The method of production of a dielectric ceramic composition as set forth in claim 1, wherein a mean particle size of the main component is 0.1 to 0.7 μm.

14. The method of production of a dielectric ceramic composition as set forth in claim 2, wherein a mean particle size of the main component is 0.1 to 0.7 μm.

15. The method of production of a dielectric ceramic composition as set forth in claim 1, wherein at least 70 wt% of the calcined powder is used with respect to the entire dielectric material as 100 wt%.

16. The method of production of a dielectric ceramic composition as set forth in claim 2, wherein at least 70 wt% of the calcined powder is used with respect to the entire dielectric material as 100 wt%.

17. A method of production of an electronic device containing dielectric layers comprising forming dielectric

layers by using the dielectric ceramic composition obtained by the method set forth in claim 1.

18. A method of production of an electronic device containing dielectric layers comprising forming dielectric layers by using the dielectric ceramic composition obtained by the method set forth in claim 2.

19. A method of production of a multilayer ceramic capacitor comprised by alternately stacking interal electrodes comprised of Ni or Ni alloy and dielectric layers, where each of dielectric layers contains, in the molar ratios indicated, $BaTiO_3$: 100 moles, at least one of MgO and CaO: 0.1 to 3 moles, MnO: 0.05 to 1.0 mole, Y_2O_3: 0.1 to 5 moles, V_2O_5: 0.01 to 3 moles, and $Ba_aCa_{1-a}SiO_3$ (where the symbol (a) is a number from 0 to 1): 2 to 12 moles,

characterized by using at least 70 wt% of the material, which is premixed in $BaTiO_3$ at least one of MgO, CaO and a compound forming MgO or CaO upon heat treatment, and pre-calcined at a temperature of 900°C to 1300°C, with respect to the entire dielectric material.

20. A method of production of a multilayer ceramic capacitor comprised by alternately stacking interal electrodes comprised of Ni or Ni alloy and dielectric layers, where each of dielectric layers contains, in the molar ratios indicated, $BaTiO_3$: 100 moles, at least one of MgO and CaO: 0.1 to 3 moles, MnO: 0.05 to 1.0 mole, Y_2O_3: 0.1 to 5 moles, V_2O_5: 0.01 to 3 moles, and $Ba_aCa_{1-a}SiO_3$ (where the symbol (a) is a number from 0 to 1): 2 to 12 moles,

characterized by using at least 70 wt% of the material, which is premixed in $BaTiO_3$ at least one of MgO, CaO and a compound forming MgO or CaO upon heat treatment, MnO or a compound forming MnO upon heat treatment, Y_2O_3 or a compound forming Y_2O_3 upon heat treatment, and V_2O_5 or a compound forming V_2O_5 upon heat treatment, and pre-calcined at a temperature of 900°C to 1300°C, with respect to the entire dielectric material.

21. The method of production of a multilayer ceramic capacitor as set forth in claim 19, wherein a mean particle size of the main component is 0.2 to 0.7 μm.

22. The method of production of a multilayer ceramic capacitor as set forth in claim 20, wherein a mean particle size of the main component is 0.2 to 0.7 μm.